

# Frankfort's Street Trees/Inventory

Last Updated Tuesday, 29 January 2008

Information from "An Urban Forestry Management Report" by Athenic Systems, Lexington, Kentucky Map Orientation for Frankfort's Urban Forest.

## Recommendations from "An Urban Forestry Management Report"

- Increase the forest cover in Frankfort from the present 20% to 40% over the next 20 years.
- Plant more street trees. Increase the number of street trees from 2887 to approximately 15,000.
- Maintain the current diversity of Frankfort's urban forest, and emphasize the use of native species for street tree planting.
- Decrease high-density species by interspersing other species. Reduce the density of Acer species in certain neighborhoods by encouraging the planting of other tree species.
- Develop a list of recommended species for street tree planting. Stop further planting of some non-native species including callery pear, and reduce the use of pin oak.
- Reduce, in an orderly fashion, the concentration of defective large street trees in certain neighborhoods; replace such trees with smaller species.
- Replace, in an orderly fashion, trees where the planting lawn is too narrow. If the tree diameter is more than half the width of the planting lawn, trees should be replaced with smaller species.
- Continue monitoring of tree condition, updating the inventory. Maintain or remove trees in an orderly fashion using the data from inventory. Develop a volunteer effort to maintain street tree records.
- Develop a volunteer effort to control the invasion of weedy species in forest areas of the City to allow native species to flourish.
- Manage deer populations on city property at levels that allow regeneration and stability in forest environments. Discourage feeding deer on city property.

**Inventory: Street Tree Population and Condition** Overall AssessmentThe street tree population of Frankfort is small relative to the available planting space. Overall, while street trees in the city have a number of defects and problems, we judge the condition of the street trees to be good. Species diversity is excellent overall, and there are relatively few invasive or nuisance species. Most street trees in the City are native to the Frankfort area. Some neighborhoods have excessive concentration of tree species and low diversity. The diameter distribution indicates that the street tree population is relatively young and vigorous. Some neighborhoods have an excess number of overly large trees. The street tree population, 2887 trees, is small for a city the size of Frankfort. Our analysis (see Planting Sites, below) indicates that an additional 13,165 trees could be planted in existing planting sites within the City. In forestry terms, we can say that the urban forest of Frankfort is understocked, and provides substantial opportunities for planting and for increasing canopy cover within the City.

**Species Diversity**Species diversity, the total number of species of street trees in the city, is high. There are 86 species of street trees in the City of Frankfort (listed in Appendix 1). Although diversity is high, the city is dominated by a small number of species: eleven species represent 66% of all the street trees in the City (Table 6a). Of these 11 species, all but one, callery pear, *Pyrus calleryana*, is native to the Frankfort region. This table illustrates the number of individual trees of the top 11 street tree species in Frankfort.

Number	Botanical Name	Common Name	Nativity
318	<i>Acer saccharum</i>	sugar maple	Native
317	<i>Celtis occidentalis</i>	Pin oak	Native
141	<i>Pinus strobus</i>	black locust	Native
121	<i>Pyrus calleryana</i>	calleryana	Appalachian, naturalized
99	<i>Acer rubrum</i>	Red maple	Native
96	<i>Ulmus rubra</i>	slippery elm	Native

The table below lists all the street tree species identified in Frankfort, including their botanical and common names. The third column lists the nativity of the species, whether native to central Kentucky or elsewhere.

Number	Botanical Name	Common Name	Nativity
72	<i>Acer negundo</i>	Boxelder	Native
5	<i>Acer palmatum</i>		
9	<i>Acer platanoides</i>	Norway maple	Europe, naturalized
99	<i>Acer rubrum</i>		
318	<i>Acer saccharum</i>	sugar maple	Native
3	<i>Aesculus glabra</i>		
1	<i>Betula nigra</i>	river birch	Native
1	<i>Betula papyrifera</i>		
1	<i>Carya laciniosa</i>	shellbark hickory	Native
5	<i>Carya ovata</i>		
3	<i>Castanea mollissima</i>	Chinese chestnut	Asia, naturalized
36	<i>Catalpa speciosa</i>		
1	<i>Celtis laevigata</i>	Sugarberry	Native
317	<i>Celtis occidentalis</i>		
	<i>canadensis</i>	eastern redbud	Native
46	<i>Cornus florida</i>		
	<i>floridana</i>	flowering dogwood	Native
8	<i>Crataegus sp.</i>	Hawthorn	2
	<i>Elaeagnus umbellata</i>		
4	<i>Fagus sylvatica</i>	European beech	75
	<i>Fraxinus americana</i>		
9	<i>Ginkgo biloba</i>	Ginkgo	Asia, naturalized
24	<i>Gleditsia triacanthos</i>		
2	<i>Hibiscus syriacus</i>	rose-of-Sharon	Asia, naturalized
9	<i>Ilex opaca</i>		
56	<i>Juglans nigra</i>	black walnut	Native
92	<i>Juniperus virginiana</i>		
	<i>yellow-poplar</i>	Native	1
	<i>Lonicera sp.</i>		
22	<i>Liriodendron tulipifera</i>	Osage-orange	Central US, Naturalized
4	<i>Magnolia grandiflora</i>		
27	<i>Maclura pomifera</i>		
5	<i>Magnolia sp.</i>		
30	<i>Malus sp.</i>		
	<i>Crabapple</i>	28	
1	<i>Nyssa sylvatica</i>	Blackgum	Native
1	<i>Ostrya virginiana</i>		
	<i>eastern ho</i>		
8	<i>Paulownia tomentosa</i>	royal paulownia	Asia, naturalized
19	<i>Picea abies</i>		

naturalized19Picea pungens	blue spruce	western US5Picea rubens	Red sp
pineEastern Kentucky9Pinus nigra	Austrian pine	Europe141Pinus strobus	e
scotch pineEurope, naturalized			
6Pinus virginiana	Virginia pine	Native22Platanus occidentalis	American sycamor
cottonwoodNative2Prunus americana		American plumNative60Prunus serotina	
Japanese flowering cherryAsia8Prunus sp.		Cherry 5Prunus subhirtella	weep
Douglas-firwestern US121Pyrus calleryana		callery pearAsian, naturalized7Quercus alba	
palustris	Pin oakNative1Quercus prinus	chestnut oakNative32Quercus rubra	
Oak 3Quercus velutina	black oakNative2Rhododendron sp.	132Robinia	
matsudana	Hankow willowAsia10Syringa vulgaris	common lilacEurasia, natur	
baldcypressNative1Thuja occidentalis		northern white-cedarNorthern US15Tilia americana	
basswoodNative28Tilia cordata		littleleaf lindenEuropean9Tilia x vulgaris	Europe
eastern hemlockEastern Kentucky72Ulmus americana		American elmNative4Ulmus pumila	
naturalized96Ulmus rubra	slippery elmNative5Viburnum rufidulum		rusty bla
zelkovaAsia, naturalized			